

What is claimed is:

Sub
a14

1. A method of sorting out defect-free workpieces blanked out of a metal sheet, comprising the steps of:

inserting the workpieces into a passage having a predetermined width to sort out those workpieces which have passed through said passage;

analyzing respective images of the workpieces which have passed through said passage to compare the images with a reference workpiece image, reject workpieces which have a portion different from said reference workpiece image, and sort out other workpieces; and

applying a gage having a shape complementary to a required shape for a functional portion of the workpieces, to the workpieces which have been sorted out, and sorting out those workpieces whose functional portion has a shape complementary to the shape of said gage, as defect-free workpieces.

2. A method according to claim 1, wherein said step of analyzing respective images of the workpieces inserted into the passage comprises the steps of:

converting the images of the workpieces into respective binary images each having a predetermined number of pixels in a unit area, comparing the binary images with said reference workpiece image, reject workpieces which

have a portion different from said reference workpiece image, and sort out other workpieces.

3. A method of sorting out defect-free elements blanked out of a metal sheet, each having a body and a head joined to the body with a pair of recesses defined therebetween, the elements being stacked in a transverse direction thereof into an annular form and bundled together by an assembly of stacked endless metal rings inserted in said recesses into a belt for use in a continuously variable transmission, said method comprising the steps of:

inserting the elements into a passage having a predetermined width to sort out and deliver those elements which have passed through said passage to a feed path;

analyzing respective images of the elements which have been delivered to said feed path while in said feed path to compare the images with a reference element image, reject elements which have a portion different from said reference element image, and feed other elements;

stacking and arraying the fed elements in a transverse direction thereof downstream of said feed path; and

passing the arrayed elements through a gage having a shape complementary to a required shape for the recesses of the elements, and sorting out those elements which have passed through said gage as defect-free elements.

00788648-022104

4. A method according to claim 3, wherein said step of analyzing respective images of the elements comprises the steps of:

converting the images of the elements into respective binary images each having a predetermined number of pixels in a unit area, comparing the binary images with said reference element image, rejecting workpieces which have a portion different from said reference element image, and feeding other elements.

5. A method according to claim 3, wherein said portion different from said reference element image is either entrapped foreign matter, an outer profile deformation, or a defect.

6. A method according to claim 5, wherein said entrapped foreign matter comprises an abrasive particle used to grind an element.

7. A method according to claim 5, wherein said outer profile deformation comprises a partial broken-off region of an element.

8. A method according to claim 5, wherein said defect comprises a recesses in a surface of an element.

00788648-022101